Methods and Results: We performed 1005 PCI procedures for 718 cases including 354 acute coronary syndrome and 364 stable angina. Dual antiplatelet therapy was started for all the cases before PCI. Patients were divided into 3 groups; 1) those who stopped thienopyridine due to bleeding complication (group 1, n=17), 2) thienopyridine stopped due to other reasons (group 2, n=318) such as hepatic disorder (n=18), agranulocytosis (n=2), pancytopenia (n=1), skin eruption(n=4), bypass surgery (n=3), considered as full-term by clinicians (n=262) and others (n=29), and 3) those who continued dual antiplatelet therapy until the time of the follow-up (group 3, n=388). Clinical follow-up was available in 97% (average 2.0 ± 0.9 years). Duration of dual antiplatelet therapy was 276 ± 320 days in group 1, 234 ± 204 days in group 2, or 690 ± 339 days in group 3 ($p<0.05$ vs, groups 1 or 2). Two-year death or myocardial infarction (MI) free survival rate was 71% in group 1, 97% in group 2, and 93% in group 3 (Kaplan-Meyer method, Log-Rank test p=0.0004). Cox proportional hazard model showed thienopyridine cessation due to bleeding complication was a predictor of death or MI (HR 4.504, 95%CI 1.605 - 12.641, p=0.0043).
Conclusion: Premature thienopyridine cessation due to bleeding complication is related to clinical outcome following PCI. To the contrary, thienopyridine cessation due to other reasons did not correlate with death or MI despite the similar dual antiplatelet therapy duration.

TCT-113

Benefit of Triple Antiplatelet therapy In Patients with Acute Myocardial Infarction Who Had No reflow Phenomenon During Percutaneous Coronary Intervention

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Background: No-reflow phenomenon is a serious complication of percutnaneous coronary intervention (PCI) and associated with poor prognosis. We evaluated triple antiplatetet therapy could improve clinical outcomes in patients with acute myocardial infarction (AMI) who had no-reflow phenomenon during PCI compared with dual antiplatelet therapy.
Methods: 396 eligible patients who were enrolled in Korean Acute MI Registry (KAMIR) and had no-reflow phenomenon during PCI, were followed up at least one year. They received either dual antiplatelet therapy (aspirin and clopidogrel; dual group, n=295) or triple antiplatelet therapy (aspirin, clopidogrel and cilostazol; triple group, n=101). Angiographic no-reflow phenomenon was defined as post-PCI Thrombolysis In Myocardial Infarction flow grade 0,1 and 2. We evaluated 1-year major adverse cardiac events (MACEs) including death, myocardial infarction (MI), target lesion revascularization (TLR), and coronary artery bypass graft (CABG).
Results: Clinical characteristics of both groups were similar except that dual group was older age and had higher serum level of C-reactive protein. Angiographic characteristics were comparable between both groups except that triple group implanted more stents (1.3±0.6 vs. 1.6±0.8, p=0.004). At 6-month, the incidence of death (6.1% vs. 1.0%, p=0.025), CABG (5.4% vs. 1.0%, p=0.042), and the composite of MACEs (20.7% vs. 7.9%, p=0.004) were significantly lower in triple group. At one-year, triple group showed significantly decreased incidence of death (6.4% vs. 4.0%, p=0.037), CABG (5.4% vs. 1.0%, p=0.042), and the composite of MACEs (24.1% vs. 14.9%, p=0.033) compared with dual group with no difference in MI and TLR. Triple antiplatelet therapy (Odds ratio [OR]=0.37, 95% confidence interval [CI]: 0.18-0.73, p=0.005) was the independent prognostic factor of one-year MACEs as well as diabetes (OR=2.19, 95%CI: 1.19-4.04, p=0.012) and Killip class III/IV (OR=1.97, 95% CI:1.09-3.55, p=0.025).
Conclusions: Triple antiplatelet therapy is superior to reducing major adverse cardiac events in patients with AMI who had no-reflow phenomenon during PCI compared with dual antiplatelet therapy.

TCT-114

Duration of Dual Antiplatelet Therapy after Implantation of Drug-Eluting Stents in Diabetic Patients: A Subgroup Analysis of the Randomized, Clinical Trial

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Background: Diabetes mellitus is major predictor for adverse events in patients receiving drug-eluting stents (DES). Currently, long-term benefit of extended dual antiplatelet therapy for more than 12 months in diabetic patients treated with DES has been unknown.
Methods: A total of 2701 patients who received DES and had been free of major cardiovascular events and major bleeding for at least 12 months to receive clopidogrel plus aspirin or aspirin alone. Among them, we investigated 704 diabetic patients [clopidogrel plus aspirin (n=340) vs. aspirin alone groups (n=364)]. The primary end point was a composite of myocardial infarction (MI) or death from cardiac causes.
Results: The median duration of follow-up was 19.7 months. The cumulative risk of the primary outcome at 2 years was 2.8% with dual antiplatelet therapy, as compared with 0.4% with aspirin monotherapy (hazard ratio, 7.61; 95% confidence interval [CI], 0.88 to 65.8; P=0.07). The individual risks of MI, stroke, stent thrombosis, repeat revascularization, major bleeding, and MI or death from any cause did not differ significantly between the two groups. However, in the dual-therapy group as compared with the aspirin-alone group, there was a significant increase in the composite risk of MI, stroke or death from any cause (hazard ratio, 5.31; 95% CI, 1.46 to 19.25; P = 0.01) and in the composite risk of MI, stroke, or death from cardiac causes (hazard ratio, 7.52; 95% CI, 1.56 to 36.29; P = 0.01).

Outcome	Total No. of Events		Cumulative Event Rate at 12Mo		Cumulative Event Rate at 24Mo		Hazard Ratio (95% CI)	P Value
	Clopidogrel + Aspirin	Aspirin Alone	Clopidogrel + Aspirin	Aspirin Alone	Clopidogrel + Aspirin	Aspirin Alone		
Primary end point: MI or death from cardiac causes	7	1	1.2	0	2.8	0.4	7.61 (0.88-65.8)	0.065
Secondary end points								
Death from any cause	7	2	0.6	0	3.2	0.9	4.30 (0.82-22.51)	0.084
MI	3	1	0.9	0	0.9	0.4	2.35 (0.23-23.71)	0.468
Stroke	5	2	0.6	0.5	1.0	0.5	7.45 (0.75-73.81)	0.086
Stent thrombosis, definite	1	1	0.4	0	0.4	0.4	0 (0-0)	0.978
Repeat revascularization	11	7	2.7	1.1	4.1	1.8	1.22 (0.44-3.41)	0.70
MI or death from any cause	9	2	1.2	0	3.8	0.9	4.72 (0.96-23.33)	0.06
MI, stroke, or death from any cause	14	4	2.1	0.5	5.5	1.4	5.31 (1.46-19.25)	0.011
MI, stroke, or death from cardiac causes	12	13	2.1	0.4	4.5	0.9	7.52 (1.56-36.29)	0.012
Major bleeding, according to TIMI criteria	2	1	0.6	0	0.6	0.4	1.93 (0.17-21.85)	0.592

Conclusions: In diabetic patients who received DES, extended dual antiplatelet therapy for a period longer than 12 months yielded no benefits, as compared with aspirin monotherapy, in reducing the rate of MI or death from cardiac causes. These findings should be confirmed or refuted through larger, randomized clinical trials with longer-term follow-up.

TCT-115

Intracoronary Thromboses in Patients with Myocardial Infarction is Associated with a Specific CRP-Receptor Subtype

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Purpose: Clinical outcome in patients with STEMI/NSTEMI and/or percutaneous coronary interventions is strongly influenced by inflammation. Studies have proved an active role of C-reactive protein (CRP) as a central mediator of inflammation in these settings. Recently, Fcγ receptor IIa (FcγRIIa) has been identified as the receptor for CRP. The aim of our study was (part A) to assess whether patients with STEMI/NSTEMI and evidence of intracoronary thromboses show specific genetic subtypes of FcγRIIa (i.e. the allele H131 with weak CRP binding or R131 with strong CRP binding). In addition (part B), potential associations of FcγRIIa genetic subtype with the occurrence of in-stent restenosis was evaluated.
Methods: We conducted (part A) a genetic association study among 168 consecutive patients with STEMI/NSTEMI. Angiographic analyses classified patients' angiograms according to the type and grade of stenoses (QCA) as well as the presense of intracoronary thrombus. In addition (part B), we recruited 229 patients with previous stent implantation: 107 had developed in-stent-restenosis whereas the rest of 122 patients remained without restenosis after a 6 months follow up. All patients were genotyped for a frequent functional variant at position 131 of the mature FcγRIIa using PCR.
Results: In patients with STEMI/NSTEMI angiographically detectable intracoronary thrombus was significantly associated with the CRP receptor subtype FcγRIIa R/R (OR 3.062, 95% CI: 1.088-8.615; p=0.029). The type of myocardial infarction, the type of coronary lesion as well as the lesion vessel itself was not associated with any FcγRIIa genotype. In patients with previous stent implantation, in-stent restenosis (ISR) was not associated with the CRP receptor subtype FcγRIIa (R/R vs non-R/R: OR 1.320, 95% CI: 0.675-2.581; p=0.42; H/H vs non-H/H: 1.065, 95% CI:0.605-1.875; p=0.83). The mean time for developing restenosis in these patients was 174.6±70.9 days.
Conclusions: Our data show a genetic association of the FcγRIIa R/R131 genotype with developing intracoronary thrombosis in patients with STEMI/NSTEMI. However, this CRP receptor subtype showed no association with the occurrence of in-stent restenoses. Since platelets express FcγRIIa on their surface, this genetic difference may play a role in the pathophysiology of STEMI/NSTEMI.

Antithrombin Agents

(Abstract Nos 116-122)

TCT-116

Access and Non-Access Related Bleeding In Unselected Patients Undergoing Angioplasty

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Background: Bivalirudin (BIV) reduces bleeding compared with heparin (HEP) with or without glycoprotein IIb/IIIa inhibitors (GPI) or BIV + GPI in selected patients undergoing angioplasty (PCI) for acute coronary syndromes (ACS). The relative impact of BIV on bleeds involving vascular access and other bleeding sites is unknown.
Purpose: Evaluate the effect of anti-thrombin use on access-related (AR) and non-access related